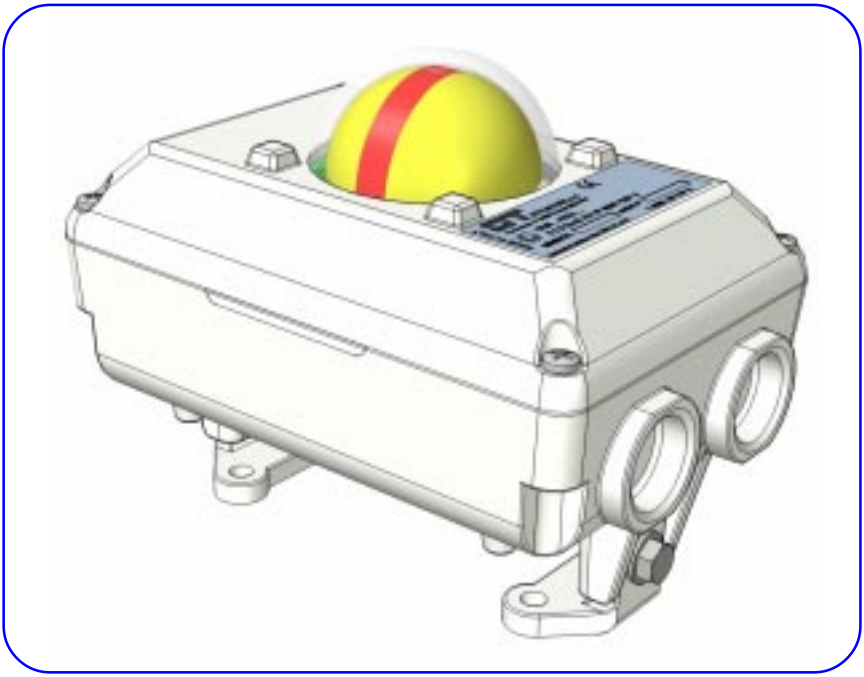
GT ATTUATORI
PNEUMATIC ACTUATORS AND ACCESSORIES

ISO 9001:2000- Cert. n° 0210/4

OPERATION AND SERVICE MANUAL

Από το 1882
ΧΡΥΣΑΦΙΔΗΣ Α.Ε.



CESI 03 ATEX 302 - 94/9/CE

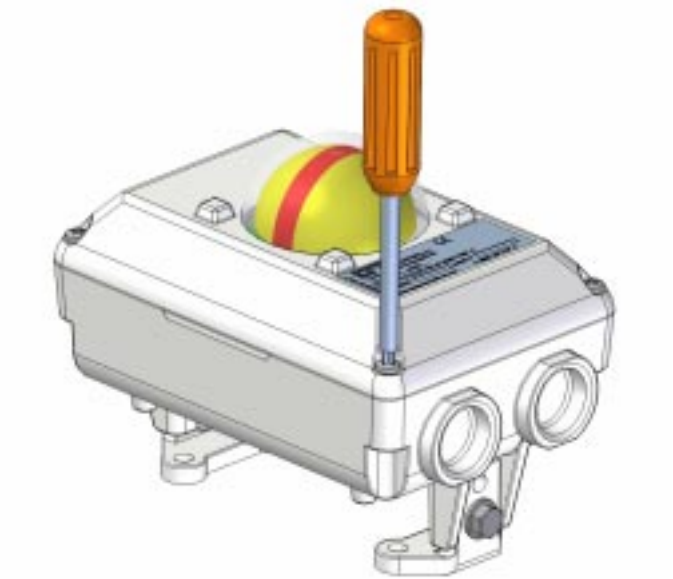
II 2 D
Ex tD A21 IP66/67 T85 °C

SIGNAL BOX
“MINIBOX GT”

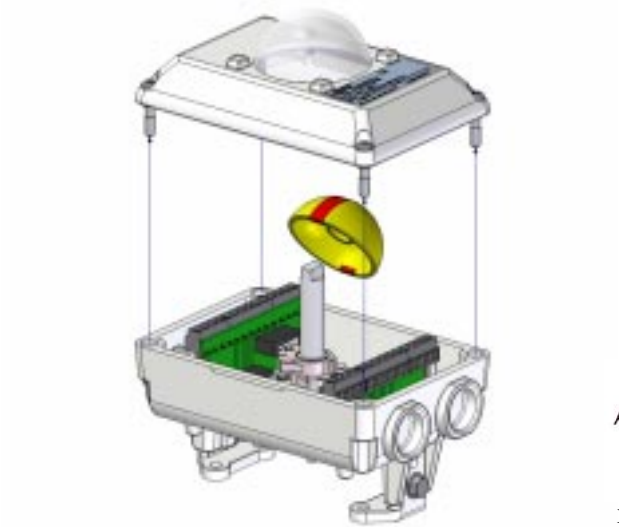
Edition 00 of 09/2008

Adjustment

To effect the regulation of the cams of the “Minibox” to proceed to the opening of the box as it follows:



1- To remove the srews of fixing of the cover of the box with a screwdriver.



2-To lift the cover and uncouple the spherical index.

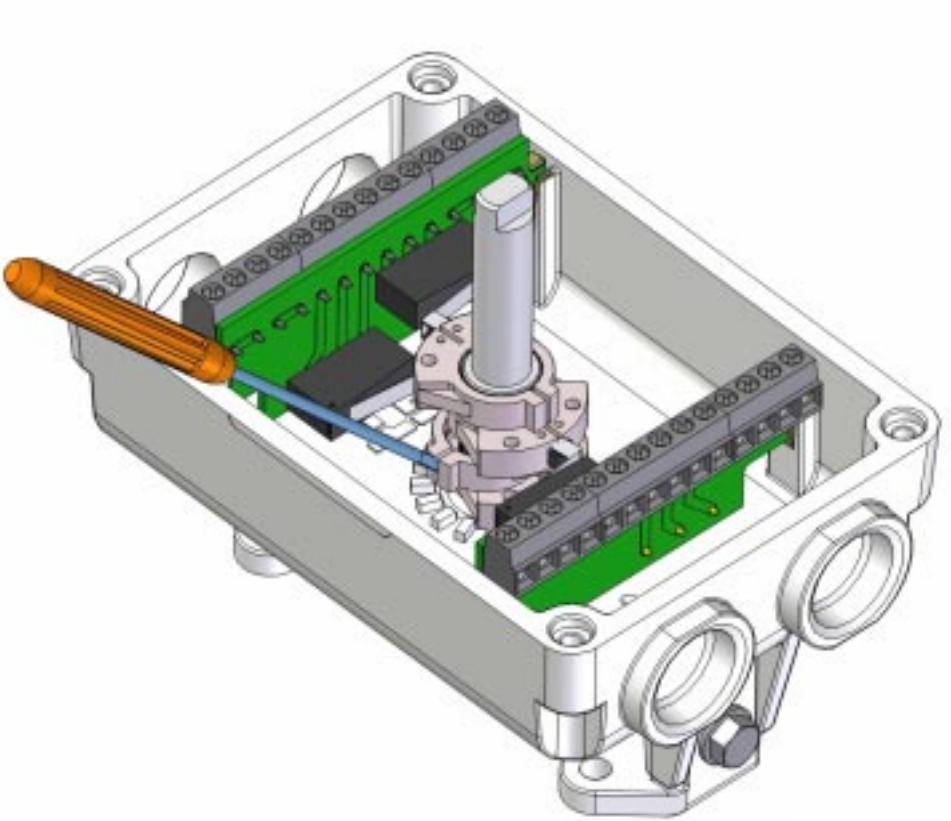
Από το 1882
ΧΡΥΣΑΦΙΔΗΣ Α.Ε.

ATTUATORI

.ΧΡΥΣΑΦΙΔΗΣ Α.Ε.: ΑΘΗΝΑ: ΑΓΡΙΝΙΟΥ 3 ΤΑΥΡΟΣ, ΤΗΛ.:210–4836315–20, ΦΑΞ:210–4817000. ΘΕΣ/ΚΗ: ΔΑ12α–ΟΤ32 ΒΙ.ΠΕ.ΣΙΝΔΟΥ, ΤΗΛ.:2310–754681–3, ΦΑΞ:2310–751835

The regulation of the cams in the Minibox is gotten using a screwdriver of small dimension as it lever described following.

To position the screwdriver in the lodging Á. of the cam and pushing in clockwise or counterclockwise sense we get the widening of the center cam and accordingly the uncoupling of the teeth on the shaft allowing the rotation of the, aforesaid cams.



Regulation of the cams using a screwdriver as lever

Από το 1882

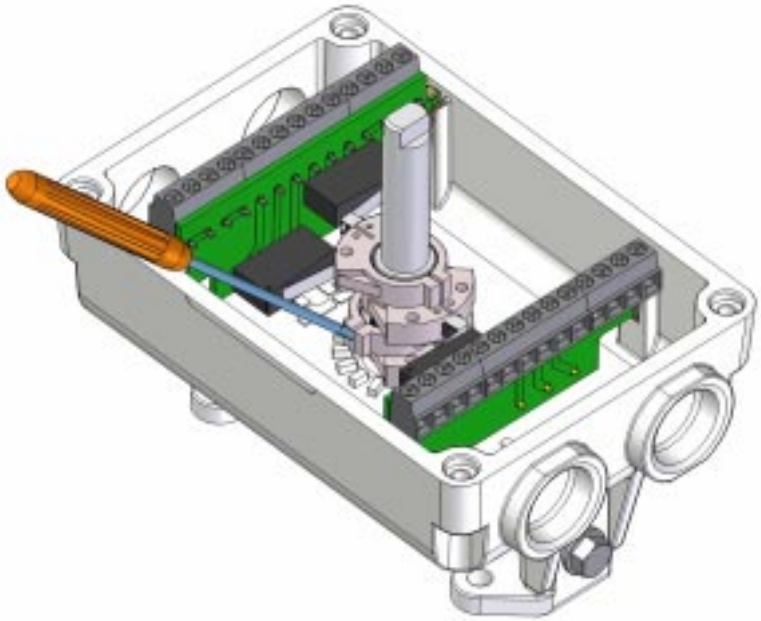
ΧΡΥΣΑΦΙΔΗΣ Α.Ε.

.ΧΡΥΣΑΦΙΔΗΣ Α.Ε.: ΑΘΗΝΑ: ΑΓΡΙΝΙΟΥ 3 ΤΑΥΡΟΣ, ΤΗΛ.:210–4836315–20, ΦΑΞ:210–4817000. ΘΕΣ/ΚΗ: ΔΑ12α–ΟΤ32 ΒΙ.ΠΕ.ΣΙΝΔΟΥ, ΤΗΛ.:2310–754681–3, ΦΑΞ:2310–751835

ΧΡΥΣΑΦΙΔΗΣ Α.Ε.

Finished the adjustment proceed with the riassembling of the box cover.

CAUTION: *During disassembling and cams adjusting it is possible that the O-Ring placed on the top of box body comes out of proper seat.*
Take care that the O-Ring is well placed into his seat before to re-assemble the cover to avoid malfunction of the BEP-BOX and/or leakages of the sealing.



Adjustment of lower cams

.ΧΡΥΣΑΦΙΔΗΣ Α.Ε.: ΑΘΗΝΑ: ΑΓΡΙΝΙΟΥ 3 ΤΑΥΡΟΣ, ΤΗΛ.:210–4836315–20, ΦΑΞ:210–4817000. ΘΕΣ/ΚΗ: ΔΑ12α–ΟΤ32 ΒΙ.ΠΕ.ΣΙΝΔΟΥ, ΤΗΛ.:2310–754681–3, ΦΑΞ:2310–751835

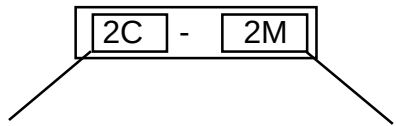
Identification

MADE IN ITALY
GT ATTUATORI s.r.l
V.le Europa,17 20090 Cusago (MI) ITALY
CESI .. ATEX ...
II 2 D Ex tD A21 IP 66/67 -T85°C
MINIBOX
serial n°
Mechanical switches: Max 250 V AC or DC
T.AMB -20°+70°C

On top of box cover is present an identification plate showing the box type identification an the serial number of the box.

On the lower left corner, close to the Ex logo is indicated the switches type and related technical data.

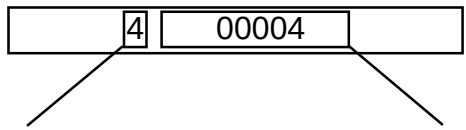
Modello:



Cams number

Microswitches number

Numero di Serie:



Production year

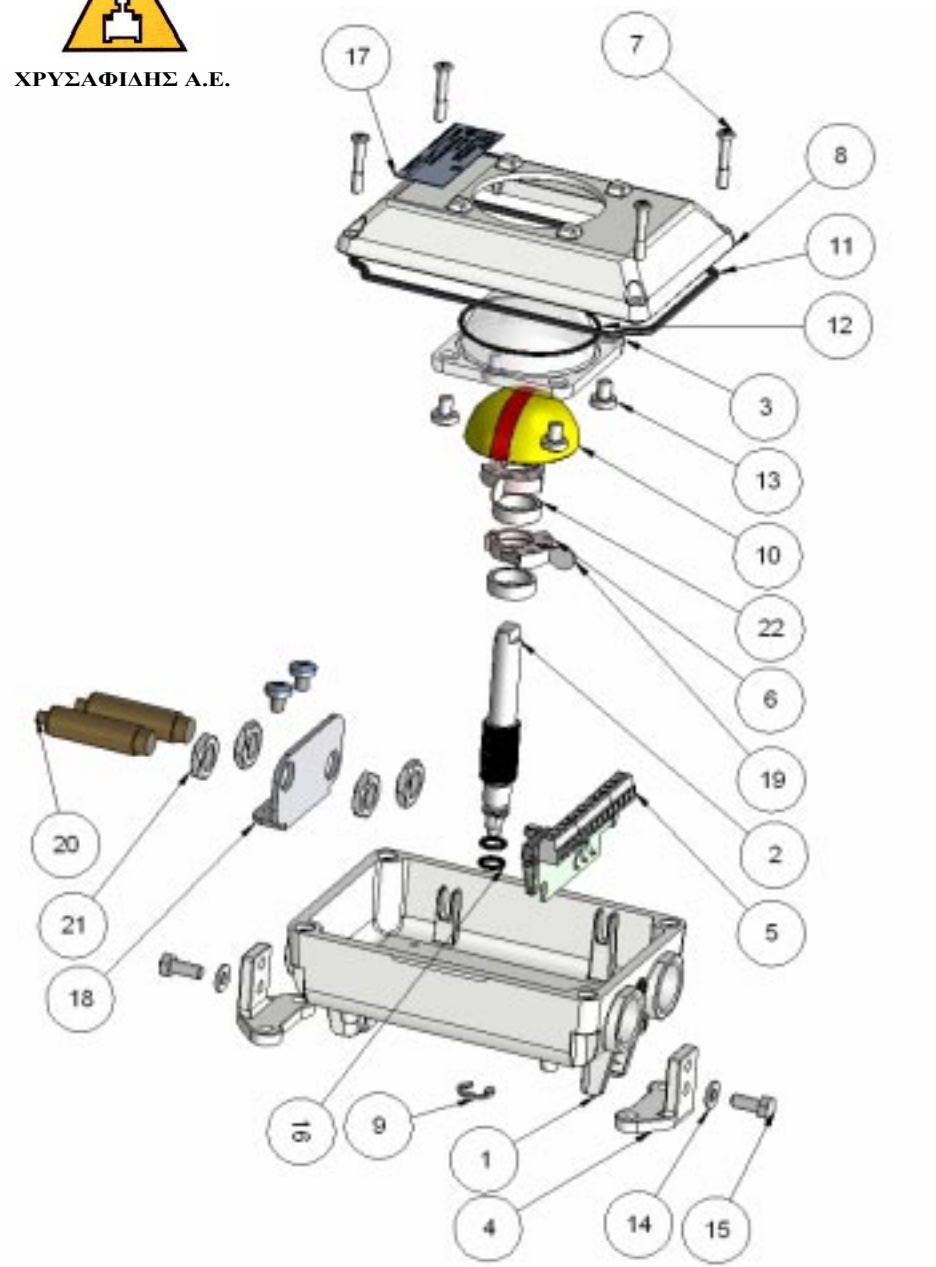
Progressive production number

ΧΡΥΣΑΦΙΔΗΣ Α.Ε.: ΑΘΗΝΑ: ΑΓΡΙΝΙΟΥ 3 ΤΑΥΡΟΣ, ΤΗΛ.:210–4836315–20, ΦΑΞ:210–4817000. ΘΕΣ/ΚΗ: ΔΑ12α–ΟΤ32 ΒΙ.ΠΕ.ΣΙΝΔΟΥ, ΤΗΛ.:2310–754681–3, ΦΑΞ:2310–751835

Spare parts

Από το 1882

ΧΡΥΣΑΦΙΔΗΣ Α.Ε.



MINIBOX GT

GT ATTUATORI

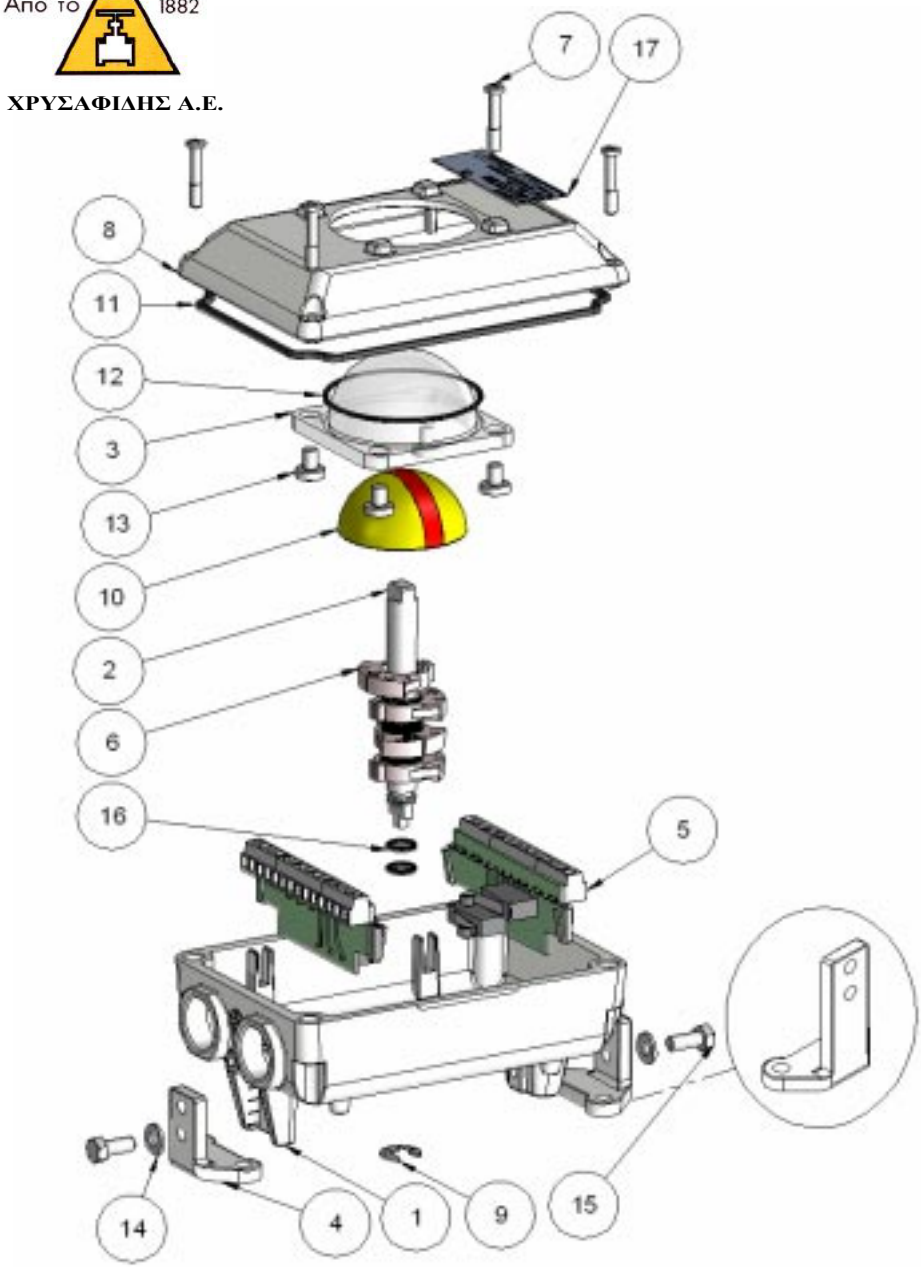
Spare parts GTS 12

Pos	Description	Qty	Material	Cod
1	Body	1	Dye cast aluminium power coated EN AB 46100	16251
2	Cam shaft	1	Steel nickeled	16212
3	Transparent indicator	1	Polycarbonate	02263
4	Feet 20 -30	2	Dye cast aluminium power coated EN AB 46100	16261
5	Board for miscroswitches	2		03938
6	Cams	2	Delrin	02267
7	TCP screws M4x22	4	Stainless steel AISI 304	01299
8	Cover	1	Dye cast aluminium power coated EN AB 46100	16257
9	Benzing circlip Ø 7	1	Stainless steel DIN6799	01226
10	Spherical Index suit of red line	1	Nylon	02264
11	Cover O-Ring Ø113.97x2.62	1	NBR (MO41)	01583
12	O-Ring Ø 50.52x1.78	1	NBR (MO41)	01530
13	TCTC screws M5x7	6	Stainless steel UNI-7688 DIN965	00999
14	Flat washer Ø 5	2	Stainless steel DIN933	01106
15	TE screws M5x12	2	Stainless steel DIN 125	01233
16	O-Ring Ø 1.78x6.75	2	NBR (MO41)	01505
17	Label	1		
18	Square of fixing	1	Nylon	
19	Blade for sensors	2	Stainless steel	
20	sensor	2		
21	M 12 nut for sensor	4	Stainless steel	
22	Spacing ring	2	Delrin	

.ΧΡΥΣΑΦΙΔΗΣ Α.Ε.: ΑΘΗΝΑ: ΑΓΡΙΝΙΟΥ 3 ΤΑΥΡΟΣ, ΤΗΛ.:210–4836315–20, ΦΑΞ:210–4817000. ΘΕΣ/ΚΗ: ΔΑ12α–ΟΤ32 ΒΙ.ΠΕ.ΣΙΝΔΟΥ, ΤΗΛ.:2310–754681–3, ΦΑΞ:2310–751835

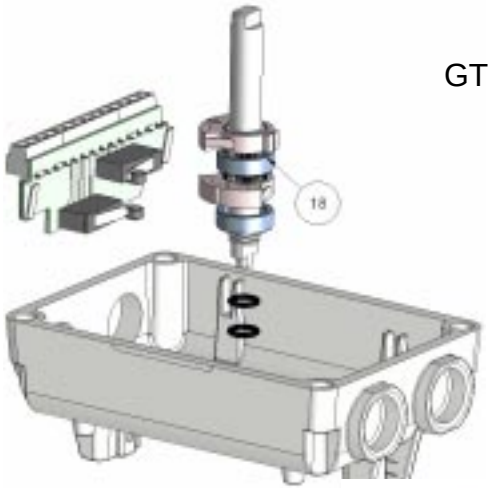
Από το 1882

ΧΡΥΣΑΦΙΔΗΣ Α.Ε.



.ΧΡΥΣΑΦΙΔΗΣ Α.Ε.: ΑΘΗΝΑ: ΑΓΡΙΝΙΟΥ 3 ΤΑΥΡΟΣ, ΤΗΛ.:210–4836315–20, ΦΑΞ:210–4817000. ΘΕΣ/ΚΗ: ΔΑ12α–ΟΤ32 ΒΙ.ΠΕ.ΣΙΝΔΟΥ, ΤΗΛ.:2310–754681–3, ΦΑΞ:2310–751835

Pos	Description	Qty MM4	Qty MM2	Material	Cod
1	Body	1	1	Dye cast aluminium power coated EN AB 46100	16251
2	Cam shaft	1	1	Steel nickeled	16212
3	Transparent indicator	1	1	Polycarbonate	02263
4	Feet 20 -30	2	2	Dye cast aluminium power coated EN AB 46100	16261
5	Board for microswitches	2	1		03938
6	Cams	4	2	Delrin	02267
7	TCP screws M4x22	4	4	Stainless steel AISI 304	01299
8	Cover	1	1	Dye cast aluminium power coated EN AB 46100	16257
9	Benzing circlip Ø 7	1	1	Stainless steel DIN6799	01226
10	Spherical Index suit of red line	1	1	Nylon	02264
11	Cover O-Ring Ø113.97x2.62	1	1	NBR (MO41)	01583
12	O-Ring Ø 50.52x1.78	1	1	NBR (MO41)	01530
13	TSP screws M5x8	4	4	Stainless steel UNI-7688 DIN965	00999
14	TE screws M5x12	2	2	Stainless steel DIN933	01106
15	Flat washer Ø 5	2	1	Stainless steel DIN 125	01233
16	O-Ring Ø 1.78x6.75	2	2	NBR (MO41)	01505
17	Label	1	1		
18	Spacing ring	0	2		



GT MM2

.ΧΡΥΣΑΦΙΔΗΣ Α.Ε.: ΑΘΗΝΑ: ΑΓΡΙΝΙΟΥ 3 ΤΑΥΡΟΣ, ΤΗΛ.:210–4836315–20, ΦΑΞ:210–4817000. ΘΕΣ/ΚΗ: ΔΑ12α–ΟΤ32 ΒΙ.ΠΕ.ΣΙΝΔΟΥ, ΤΗΛ.:2310–754681–3, ΦΑΞ:2310–751835

Από το 1882

ΧΡΥΣΑΦΙΔΗΣ Α.Ε.

Safety instructions

Description

The "Minibox" model has been conceived and constructed according to the Directive ATEX 94/9/CE Group II, category 2D,with reference to the standard EN 61241-0 and 61241-1

The protection mode is: **Ex tD A21 IP66/67 T 85° C**

electric characteristics

	Proximity sensors	Inductive sensors	Micro-mechanical
Maximum nominal voltage	10 ÷ 60 v	25 ÷ 30 V DC	250 V
Maximum nominal current	200 mA	100 mA	5A
Frequenzy	3000 Hz		50 ÷ 60 Hz
Environmental temp.	- 20 + 70 ° C	- 20 + 70 ° C	- 20 + 70 ° C
Environmental temp.		- 45 + 70 ° C	

Marking

CE .... Ex II 2 D

CE	Marking of compliance with the applicable European directives
....	n. of notified organism (for ATEX surveillance)
Ex	Marking of compliance with the directive 94/9/CE and with the relative technical rules.
II	Group II (surface)
2	Category 2 apparatus
D	Explosive atmosphere with presence of dusts
Ex tD A 21	Protection through custody, method Á. zone 21
IP66/67	Degree of protection
T 85 °C	Maximum surface temperature
Environmental temperature	-20 + 70° C -45°C + 70° C

Dangerous area		Installation category in compliance with the Directive ATEX 94/9/CE
Dusts	Zone 21	2 D
Dusts	Zone 22	3 D

.ΧΡΥΣΑΦΙΔΗΣ Α.Ε.: ΑΘΗΝΑ: ΑΓΡΙΝΙΟΥ 3 ΤΑΥΡΟΣ, ΤΗΛ.:210–4836315–20, ΦΑΞ:210–4817000. ΘΕΣ/ΚΗ: ΔΑ12α–ΟΤ32 ΒΙ.ΠΕ.ΣΙΝΔΟΥ, ΤΗΛ.:2310–754681–3, ΦΑΞ:2310–751835

Safety instructions for the installation in dangerous areas

Installation of the enclosure

Before installing the BOX,carefully read the user and maintenance manual.

Suitability of the Minibox for the installation site

In the case it is used in areas with danger of explosion,it is important to check that the box is suitable for the area classification and for the characteristis of the inflammable substances present on the installation.

The fundamental safety requirements against the risk of explosino in the classified areas are established by the European directives 94/9/CE of 23 march 1994 (with reference to the equipment) and 1999/92/CE of 16 December 1999 (with reference to the installations).

Areas with presence of gases,inflammable vapours or fogs,and dusts

The criteria for the classification of the areas with a risk of explosion are established by the standard EN 60079-10(clasification of the dangerous areas due to the presence of gases) and EN61241-10 (classification of the areas in which combustible duts can be present).

The technical requirements of the electrical installations in the classified areas are given by the regulation EN 60079-14 (Electrical constructions for explosive atmospheres due to the presence of gases - Part 14: Electrical installations in areas with danger of explosions due to the presence of gases (different from mines);

EN 60079 - 17 Electrical constructions for explosive atmospheres due the presence of gases - Part 17: Check and maintenance of the electrical installation in areas with danger of explosion du to the presence of gases (different from mines);EN 61241 - 14 Electrical constructions destined to be used in the presence of combustible dusts - Part 14: Choice and installation; and EN 61241 - 17 Electrical constructions destined to be used in the presence of combustible dusts - Part 17 :

Check and maintenance of the electrical installations in areas with danger of explosion (differnt from mines).

According to these technical and legislative provisions, the choice of the box must consider the following factors:

- Type of installation: surface installations (group II)
- Area classification:0,1,2,20,21,22(for which equipment of 1,2,3 category respetively is suitable)
- Characteristics of the inflammable sustances present in the form of gases,vapours or fogs , and dusts layer.
- Sub-group IIA, IIB, IIC
- T6 temperature class (it defines the ignition te ;)
- IP 66 (degree of protection)

.ΧΡΥΣΑΦΙΔΗΣ Α.Ε.: ΑΘΗΝΑ: ΑΓΡΙΝΙΟΥ 3 ΤΑΥΡΟΣ, ΤΗΛ.:210–4836315–20, ΦΑΞ:210–4817000. ΘΕΣ/ΚΗ: ΔΑ12α–ΟΤ32 ΒΙ.ΠΕ.ΣΙΝΔΟΥ, ΤΗΛ.:2310–754681–3, ΦΑΞ:2310–751835

Cable inputs

The connections must have realized through entrances of cable certified for the categories 2D complying with the standard EN61241-1 and to guarantee a level least of protection IP66/67.

When the cable input is made by means of a cable gland with a minimum IP66/67 protection degree,it must be correctly chosen with respect to the type of installation and cable.The cable glandmust be strictly tightened so that the sealing rigs can create the pressure necessary to:

a) avoid the transmission of mechanical strains onto the terminals:
b) guarantee the mechanical protection (IP degree) of the box.

Furthemore ,any fittings which are not supplied by the costructor.
For the cylindrical edging AN ISO 228 must have realized a device of block against the loosening using a loctite sealing procedure.
The used not holes must be closed with certified plugs for categories 2D and to guarantee the protection IP66/67

Ground connection

Besides the ground connection foreseen inside the box,the latter is equipped with a second externally positioned ground connection.It must be connected to the general ground of the installation using a suitable section conductor.
According to the S section of the line conductor,the section of the ground conductor must be:

= S	Per S ≤ 16mm²
16	Per 16 mm ²< S ≤ 35 mm ²
≥ 0.5 S	Per S > 35 mm ²

.ΧΡΥΣΑΦΙΔΗΣ Α.Ε.: ΑΘΗΝΑ: ΑΓΡΙΝΙΟΥ 3 ΤΑΥΡΟΣ, ΤΗΛ.:210–4836315–20, ΦΑΞ:210–4817000. ΘΕΣ/ΚΗ: ΔΑ12α–ΟΤ32 ΒΙ.ΠΕ.ΣΙΝΔΟΥ, ΤΗΛ.:2310–754681–3, ΦΑΞ:2310–751835

The “Minibox GT” needs no extraordinary maintenance.In fact,inside it, there are no organs wich need it.
When it is necessary to open the box,unscrew the 4 fixing srews.

ONLY AFTER CUTTING THE VOLTAGE.

- The terminals of the electrical connections must be strictly tightened to avoid high contact resistance and consequent overheating
- The cover must be stictly tightened and blocked against the loosening of the suitable locking srew.
- The replacement of fittings and parts of the cable inputs must be carried out using identical components to those supplied by the manufacturer in order to garantee a suitable protection.
- When substituting the clamping screws please make sure you use screw type A2-70 UNI 5931

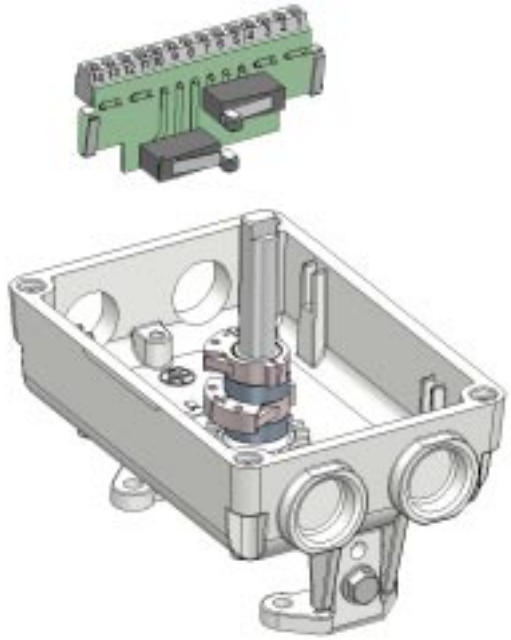
.ΧΡΥΣΑΦΙΔΗΣ Α.Ε.: ΑΘΗΝΑ: ΑΓΡΙΝΙΟΥ 3 ΤΑΥΡΟΣ, ΤΗΛ.:210–4836315–20, ΦΑΞ:210–4817000. ΘΕΣ/ΚΗ: ΔΑ12α–ΟΤ32 ΒΙ.ΠΕ.ΣΙΝΔΟΥ, ΤΗΛ.:2310–754681–3, ΦΑΞ:2310–751835

ΧΡΥΣΑΦΙΔΗΣ Α.Ε.

Electrical connections

Caution: To be sure that power is swiched off before to proceed with electrical connections.

MINIBOX GTMM2



Board MINIBOX MM2 connection

5. Commone "sup" micro-switch max. ~250V 5A
6. N.O. (normally open) "sup" micro-switch
7. N.C. (normally closed) "sup" micro-switch
8. N.C. (normally closed) "inf" micro-switch
9. N.O. (normally open) "inf" micro-switch
10. Commone "inf" micro-switch max. ~250V 5A

.ΧΡΥΣΑΦΙΔΗΣ Α.Ε.: ΑΘΗΝΑ: ΑΓΡΙΝΙΟΥ 3 ΤΑΥΡΟΣ, ΤΗΛ.:210–4836315–20, ΦΑΞ:210–4817000. ΘΕΣ/ΚΗ: ΔΑ12α–ΟΤ32 ΒΙ.ΠΕ.ΣΙΝΔΟΥ, ΤΗΛ.:2310–754681–3, ΦΑΞ:2310–751835

ATTUATORI
PNEUMATIC ACTUATORS AND ACCESSORIES

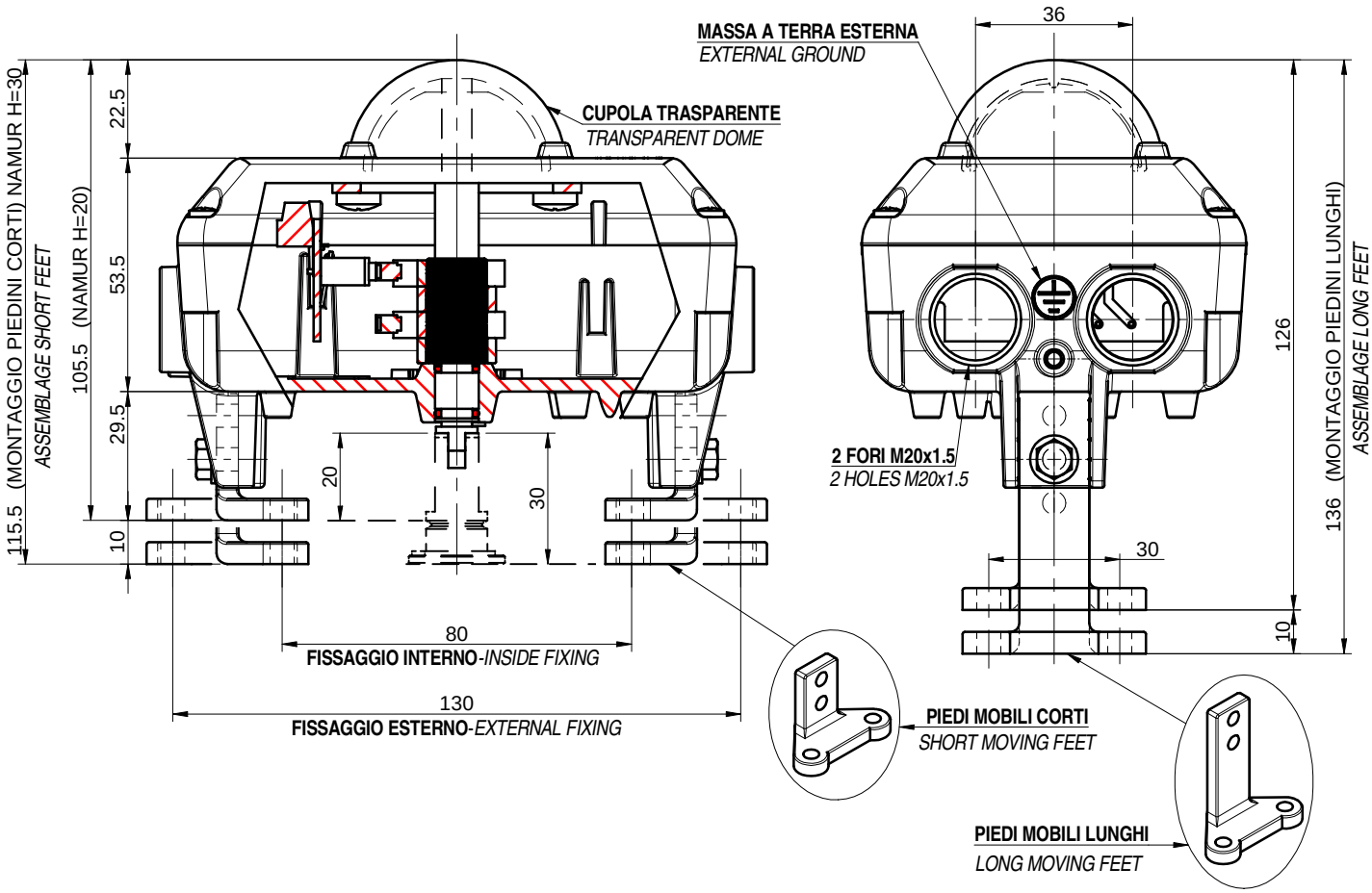
ISO 9001:2000 - Cert. n°0210/3

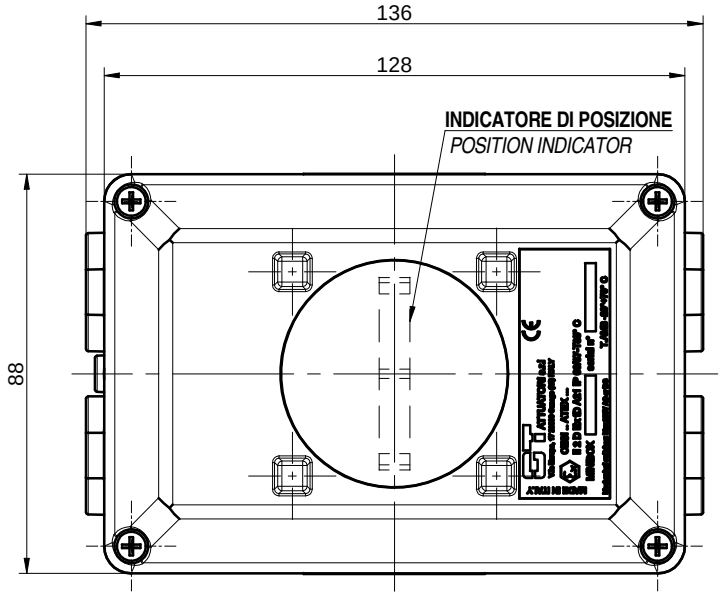
ATEX 94/9/CE

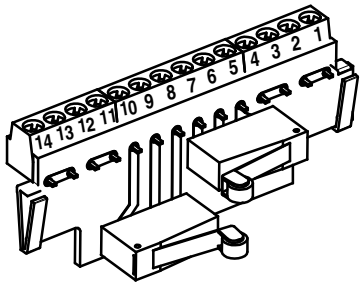
BOX INDICATORE / *SIGNAL BOX*

" MINIBOX GT " MODELLO / *MODEL:* " GT MM2 "

MICRO MECCANICI / *MICRO-SWITCH:* " OMROM SSG-5L2P "





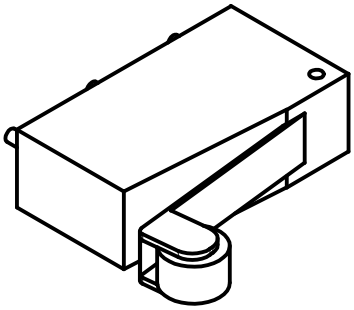


CONNESSIONE SCHEDA MINIBOX GT MM2

1 - Comune microinterruttore "A" max. ~250V 5A
2 - N.O. (normalmente aperto) microinterruttore "A"
3 - N.C. (normalmente chiuso) microinterruttore "A"
4 - Comune microinterruttore "B"
5 - N.O. (normalmente aperto) microinterruttore "B"
6 - N.C. (normalmente chiuso) microinterruttore "B"

Board MINIBOX GT MM2 connection
1 - Commone "sup" micro-switch max. ~250V 5A
2 - N.O. (normally open) "sup" micro-switch
3 - N.C. (normally closed) "sup" micro-switch
4 - N.C. (normally closed) "inf" micro-switch
5 - N.O. (normally open) "inf" micro-switch
6 - Commone "inf" micro-switch max. ~250V 5A

Από το 1882

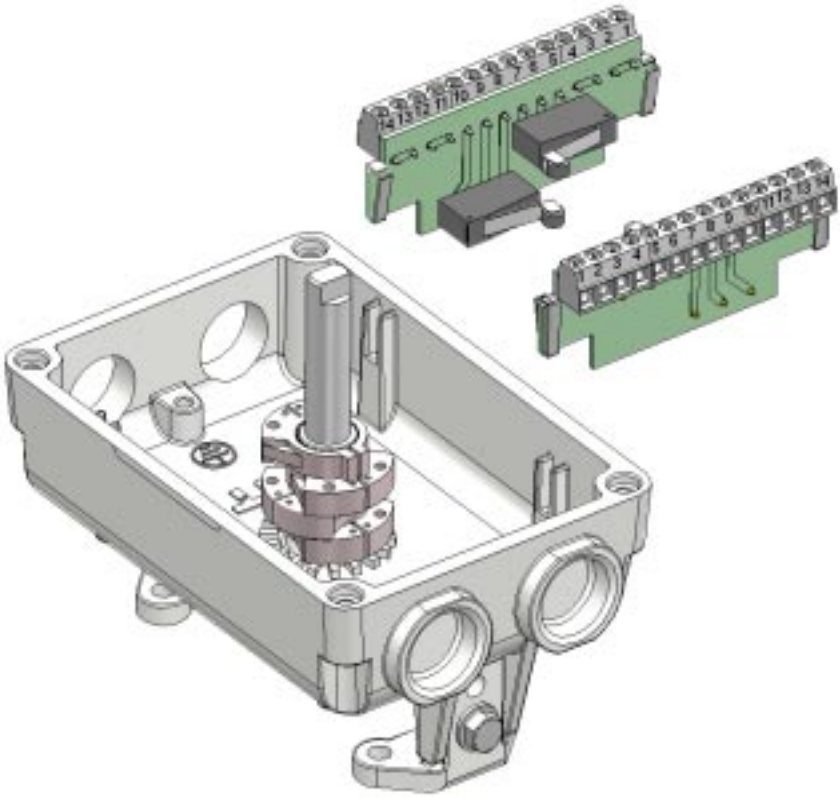


CARATTERISTICHE GENERALI / *GENERAL RATINGS*								
Tensioni ***Rated voltage***	**Senza carico induttivo Non inductive load**				**Carico induttivo Inductive load**			
	Carico resistivo *Resistive load*		Carico lampada *Lamp load*		Carico induttivo *Inductive load*		Carico motore *Motor load*	
	NC	NO	NC	NO	NC	NO	NC	NO
125 VAC	5(0,1) A (see note 1)		1,5A	0,7A	3A		2,5A	1,3A
250 VAC	3A		1A	0,5A	2A		1,5A	0,8A
8 VDC	5A		2A		5A		3A	
14 VDC	5A		2A		4A		3A	
30 VDC	4(0,1) A (see note 1)		2A		3A		3A	
125 VDC	0,4A		0,05A		0,4A		0,05A	
250 VDC	0,2A		0,03A		0,2A		0,05A	

NOTE: 1 - The values in the parentheses are for the SSG-01

SPECIFICHE CONTATTI / *CONTACT SPECIFICATIONS*				
ARTICOLO / *ITEM*		**SSG-5**	**SSG-01H.T**	**SSG-01P**
CONTATTI *CONTACT*	SPECIFICHE / *SPECIFICATION*	RIVET	CROSSBAR	CROSSBAR
	MATERIALE / *MATERIAL*	SILVER	GOLD ALLOY	GOLD ALLOY
	APERTURA (VALORE STANDARD) *GAP (STANDARD VALUE)*	0.5 mm	0.25 mm	0.5 mm
INRUSH CURRENT	NC	20 A MAX	1 A MAX	1 A MAX
	NO	10 A MAX	1 A MAX	1 A MAX
MINIMO CARICO APPLICABILE *MINIMUM APPLICABLE LOAD*		160 mA at 5 VDC	1 mA at 5 VDC	1 mA at 5 VDC

MINIBOX GTMM4



Board MINIBOX GTMM4 connection

5. Commone “sup” micro-switch max. ~250V 5A
6. N.O. (normally open) “sup” micro-switch
7. N.C. (normally closed) “sup” micro-switch
8. N.C. (normally closed) “inf” micro-switch
9. N.O. (normally open) “inf” micro-switch
10. Commone “inf” micro-switch max. ~250V 5A

ΧΡΥΣΑΦΙΔΗΣ Α.Ε.: ΑΘΗΝΑ: ΑΓΡΙΝΙΟΥ 3 ΤΑΥΡΟΣ, ΤΗΛ.:210–4836315–20, ΦΑΞ:210–4817000. ΘΕΣ/ΚΗ: ΔΑ12α–ΟΤ32 ΒΙ.ΠΕ.ΣΙΝΔΟΥ, ΤΗΛ.:2310–754681–3, ΦΑΞ:2310–751835

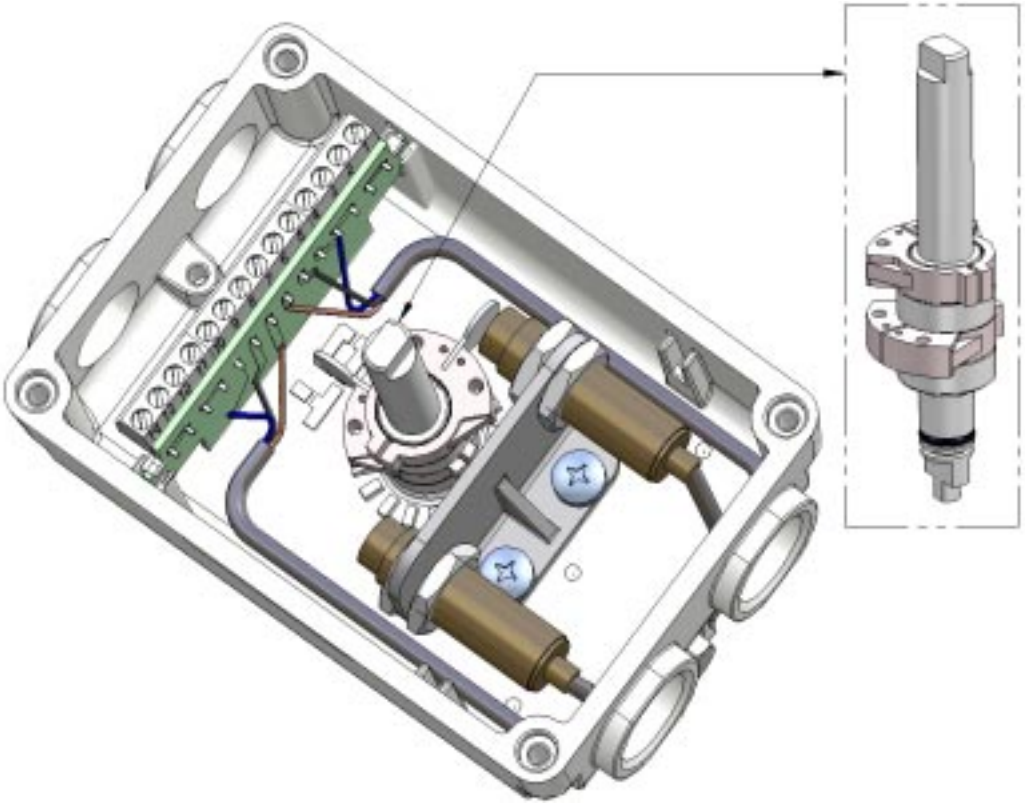
ΧΡΥΣΑΦΙΔΗΣ Α.Ε.

MINIBOX GTS 3.5

Board MINIBOX GTS 3.5 connection

.ΧΡΥΣΑΦΙΔΗΣ Α.Ε.: ΑΘΗΝΑ: ΑΓΡΙΝΙΟΥ 3 ΤΑΥΡΟΣ, ΤΗΛ.:210–4836315–20, ΦΑΞ:210–4817000. ΘΕΣ/ΚΗ: ΔΑ12α–ΟΤ32 ΒΙ.ΠΕ.ΣΙΝΔΟΥ, ΤΗΛ.:2310–754681–3, ΦΑΞ:2310–751835

MINIBOX GTS12



Board MINIBOX GTS 12 connection

5. Negative ground “inf” sensor
6. PNP positive output for user “inf” sensor
7. Supply of “inf” sensor 10÷30 VDC max. 100mA
8. Supply of “sup” sensor 10÷30 VDC max. 100mA
9. Positve ground “sup” sensor
10. Negative ground “sup” sensor

.ΧΡΥΣΑΦΙΔΗΣ Α.Ε.: ΑΘΗΝΑ: ΑΓΡΙΝΙΟΥ 3 ΤΑΥΡΟΣ, ΤΗΛ.:210–4836315–20, ΦΑΞ:210–4817000. ΘΕΣ/ΚΗ: ΔΑ12α–ΟΤ32 ΒΙ.ΠΕ.ΣΙΝΔΟΥ, ΤΗΛ.:2310–754681–3, ΦΑΞ:2310–751835

Από το 1882

ΧΡΥΣΑΦΙΔΗΣ Α.Ε.

Tehnical data

Allowable environment Temperature	-20 + 70° C on work -40 + 80° C stock
Protection type	IP66/67
Dimensions	See on lay-out
Approximate weight	0 ,6 Kg
Body and brackets	Dye cast aluminium power coated (lega EN AC -AISI 11 Cu2 (Fe) 2Fe UNI EN 1706
Electrical connections	Extractable 1,5mm² terminals AW G14
Fasteners	Stainless steel AISI 304 Class A2-70 UNI 5931
Connection cables fittings	They must be certified according to the standard EN60079-0 , EN 60079-1 EN 61241-0 ed EN 61241-1 in compliance with the Directive ATEX 94/9/CE and guaranteeing an IP66 minimum protection degree.
Rotation way	Reversibile
Adjustment	adjustable with cams
Mechanical microswitches max.4	OMRON SSG-5L2P~250V 5 A or Similar
Proximity sensors max.2	P+F NBN4-12GM40-E2 ÷ 30V d.c. 100mA or similar
Inductive sensors max.2	P+F SC3,5 - N0 BLAU II 1 D Ex ia D20 T 108°C II 3 G Ex nL IIC T6 X II 3 D IP 67 T 112°c X 100mA or similar

.ΧΡΥΣΑΦΙΔΗΣ Α.Ε.: ΑΘΗΝΑ: ΑΓΡΙΝΙΟΥ 3 ΤΑΥΡΟΣ, ΤΗΛ.:210–4836315–20, ΦΑΞ:210–4817000. ΘΕΣ/ΚΗ: ΔΑ12α–ΟΤ32 ΒΙ.ΠΕ.ΣΙΝΔΟΥ, ΤΗΛ.:2310–754681–3, ΦΑΞ:2310–751835

ATTUATORI
PNEUMATIC ACTUATORS AND ACCESSORIES

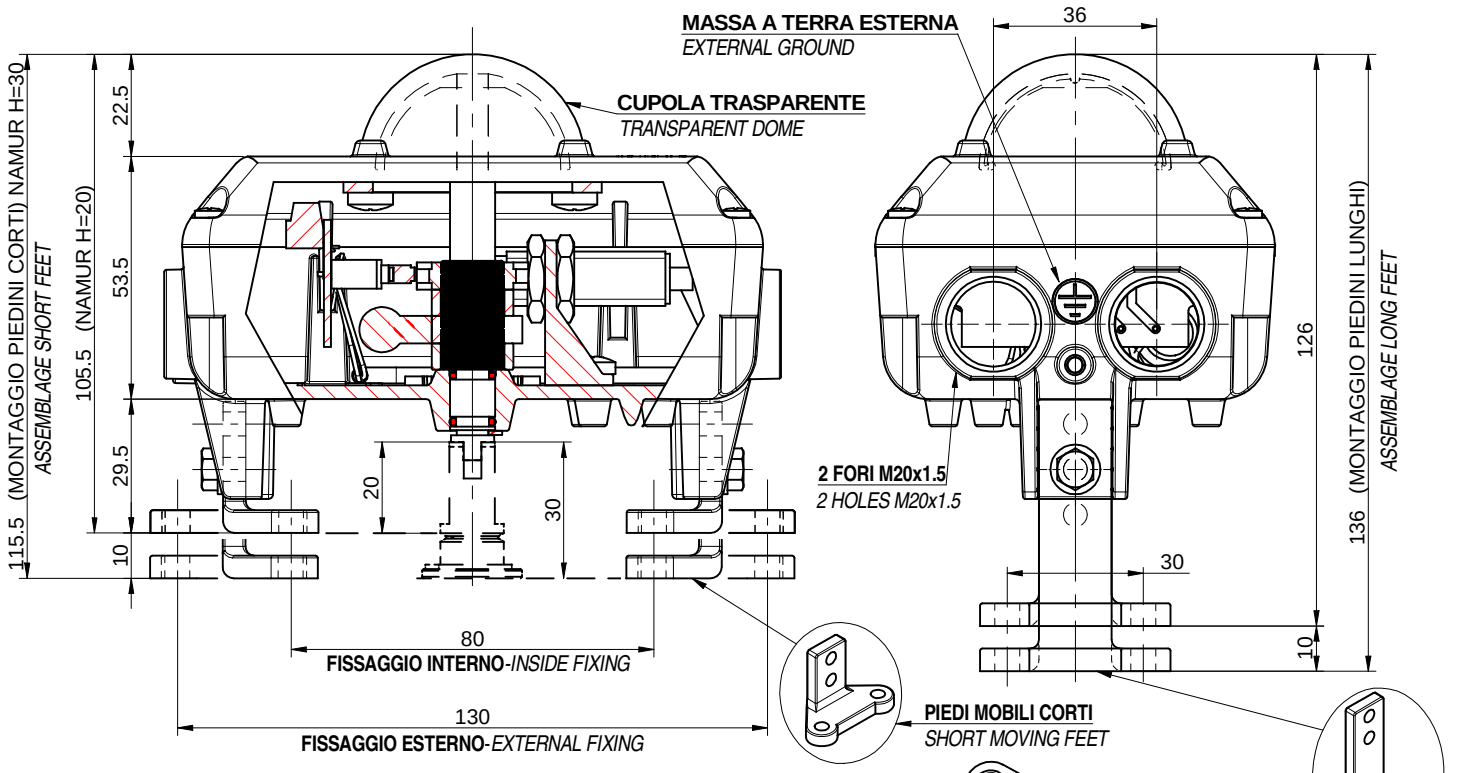
ISO 9001:2000 - Cert. n°0210/3

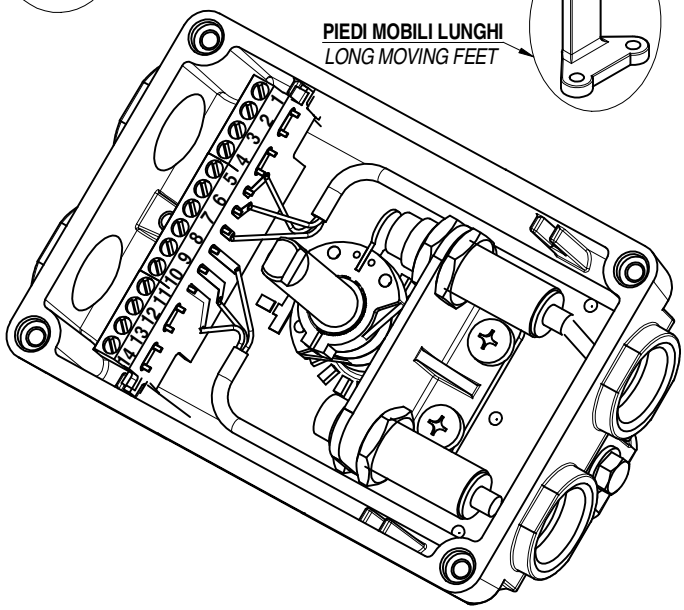
ATEX 94/9/CE

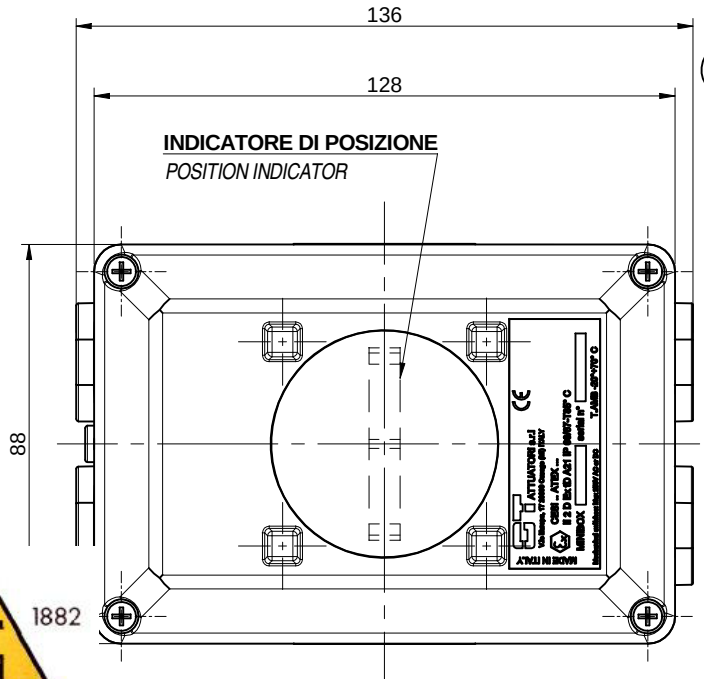
BOX INDICATORE / *SIGNAL BOX*

" **MINIBOX GT** " MODELLO / *MODEL:* " GTS 12 "

SENSORE / *SENSOR:* " P+F NBN4-12 GM40-E2 "







Connessione scheda MINIBOX GTS 12

5 - Massa-negativa sensore " inf "
6 - Uscita positiva PNP per utilizzatore sensore " inf "
7 - Alimentazione sensore 10÷30 VDC max. 100mA sensore " inf "
8 - Alimentazione sensore 10÷30 VDC max. 100mA sensore "sup"
9 - Uscita positiva PNP per utilizzatore sensore " sup "
10 - Massa-negativa sensore "sup"

Board MINIBOX GTS 12 connection

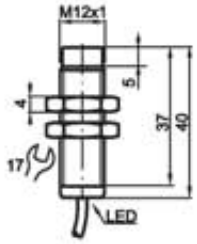
5 - Negative ground "inf" sensor
6 - PNP positive output for user "inf" sensor
7 - Supply of "inf" sensor 10 ÷30 VDC max.100A
8 - Supply of "sup" sensor 10 ÷30 VDC max. 100mA
9 - Positive ground "sup" sensor
10 - Negative ground "sup" sensor

Από το 1882

Inductive proximity switches

NBN4-12GM40-E2

Basic series

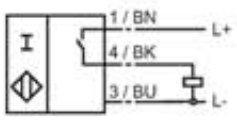


CE

General specifications	
Switching element function	PNP Make function
Rated operating distance s_n	4 mm
Installation	not embeddable
Assured operating distance s_a	0 ... 3,24 mm
Reduction factor r_{Al}	0,45
Reduction factor r_{Cu}	0,4
Reduction factor r_{V2A}	0,75
Nominal ratings	
Operating voltage U_B	10 ... 30 V
Switching frequency f	0 ... 800 Hz
Hysteresis H	typ. %
Reverse polarity protection	Protected against reverse polarity
Short-circuit protection	pulsing
Voltage drop U_d	≤ 3 V
Operating current I_L	0 ... 100 mA
Off-state current I_r	0 ... 0,5 mA typ. 0,1 µA at 25 °C
No-load supply current I_0	≤ 15 mA
Indication of the switching state	all direction LED, yellow
Standard conformity	
Standards	EN 60947-5-2
Ambient conditions	
Ambient temperature	-25 ... 70 °C (248 ... 343 K)
Mechanical specifications	
Connection type	2 m, PVC cable
Core cross-section	0.14 mm²
Housing material	brass, nickel-plated
Sensing face	PBT
Protection degree	IP67

Connection type:

E2



www.pepperl-fuchs.com
PEPPERL+FUCHS GmbH

2004-07-26 – 083311_ENG.xml

Subject to reasonable modifications due to technical advances.
Copyright Pepperl+Fuchs, Printed in Germany